TO2390 225T6860

FIG. 1

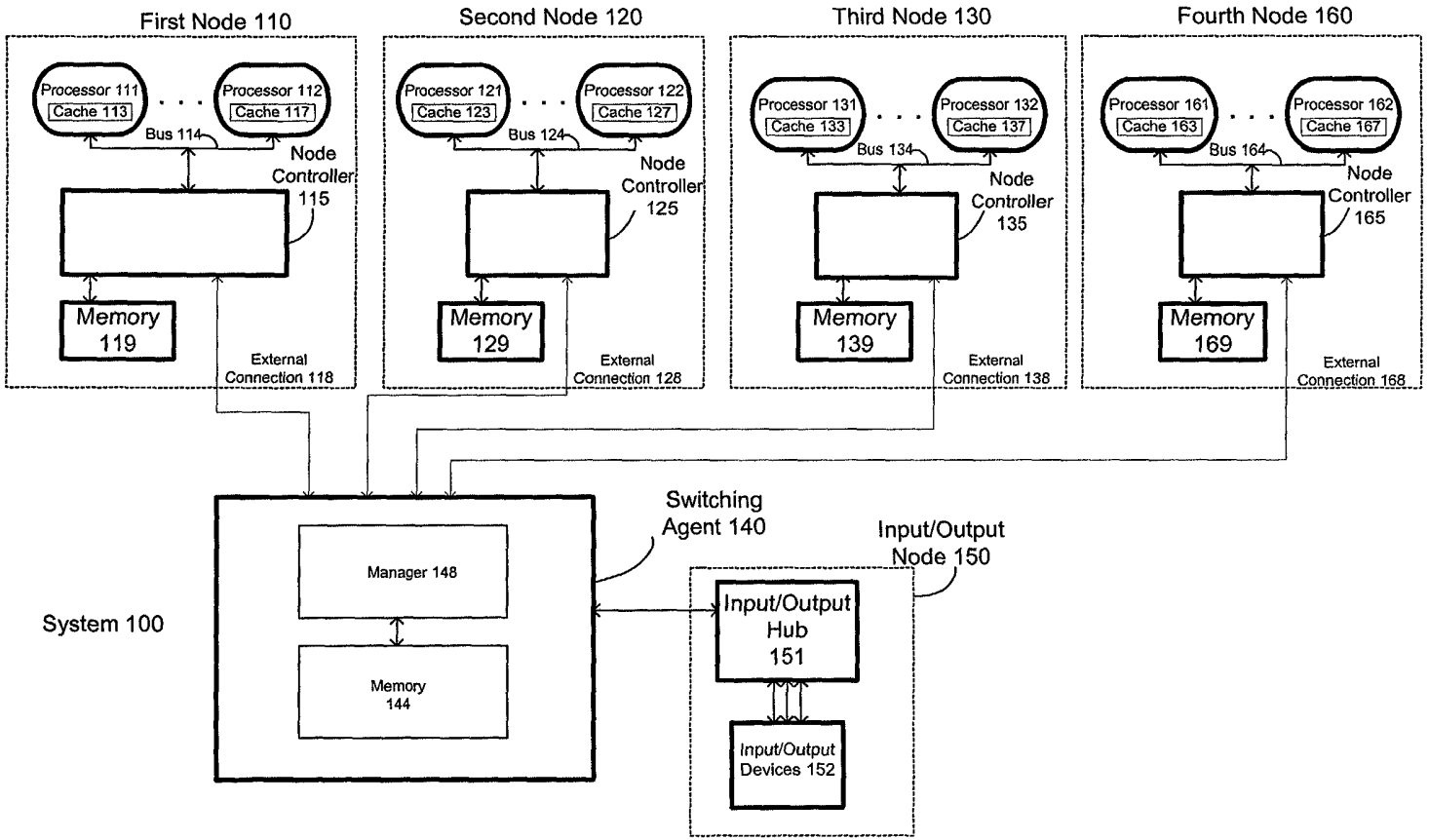


FIG. 2

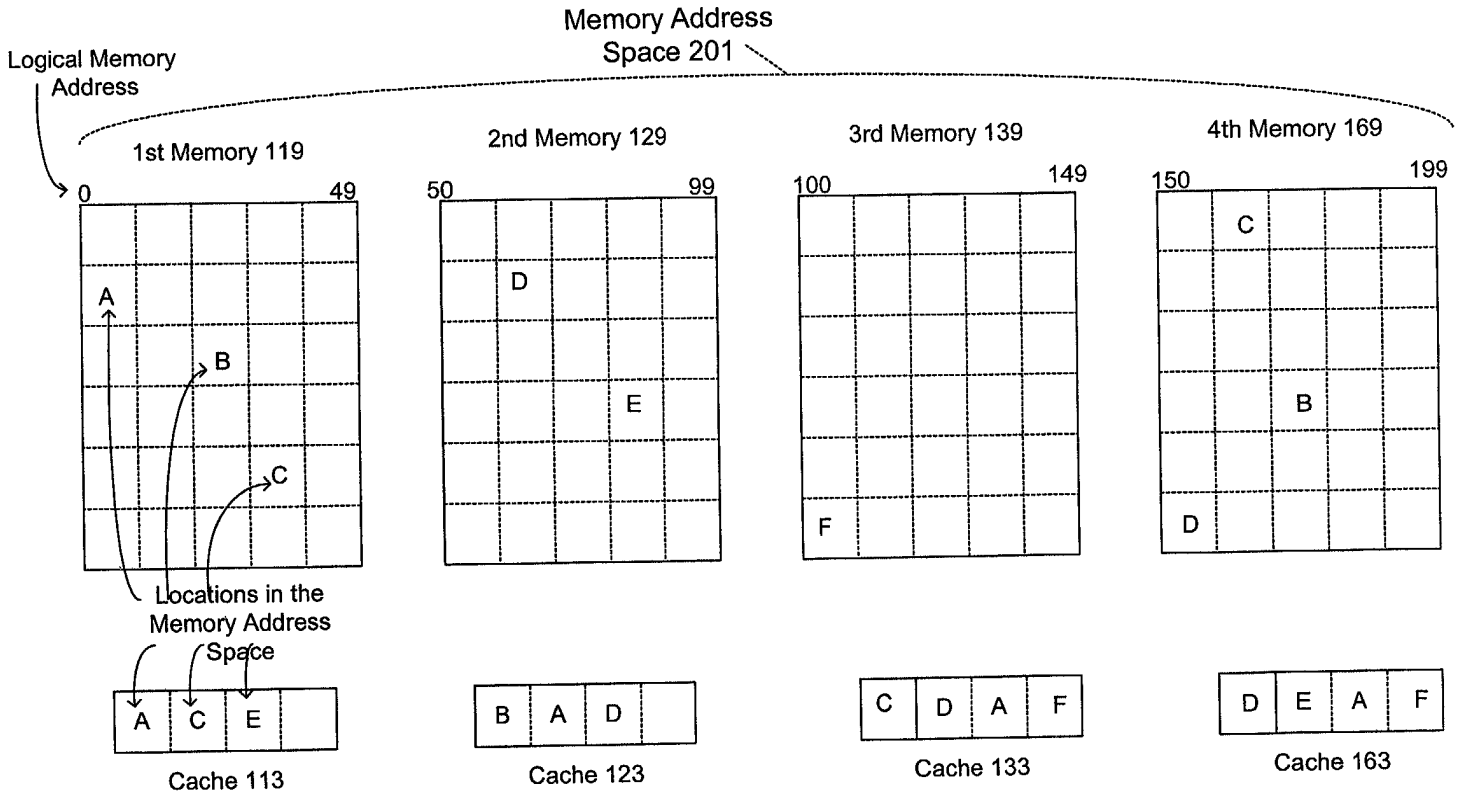

Memory Address Space 201
Logical Memory Address
1st Memory 119
2nd Memory 129
3rd Memory 139
4th Memory 169
0
49
50
99
100
149
150
199
A
B
C
D
E
F
Locations in the Memory Address Space
A C E
B A D
C D A F
D E A F
Cache 113
Cache 123
Cache 133
Cache 163

FIG. 3

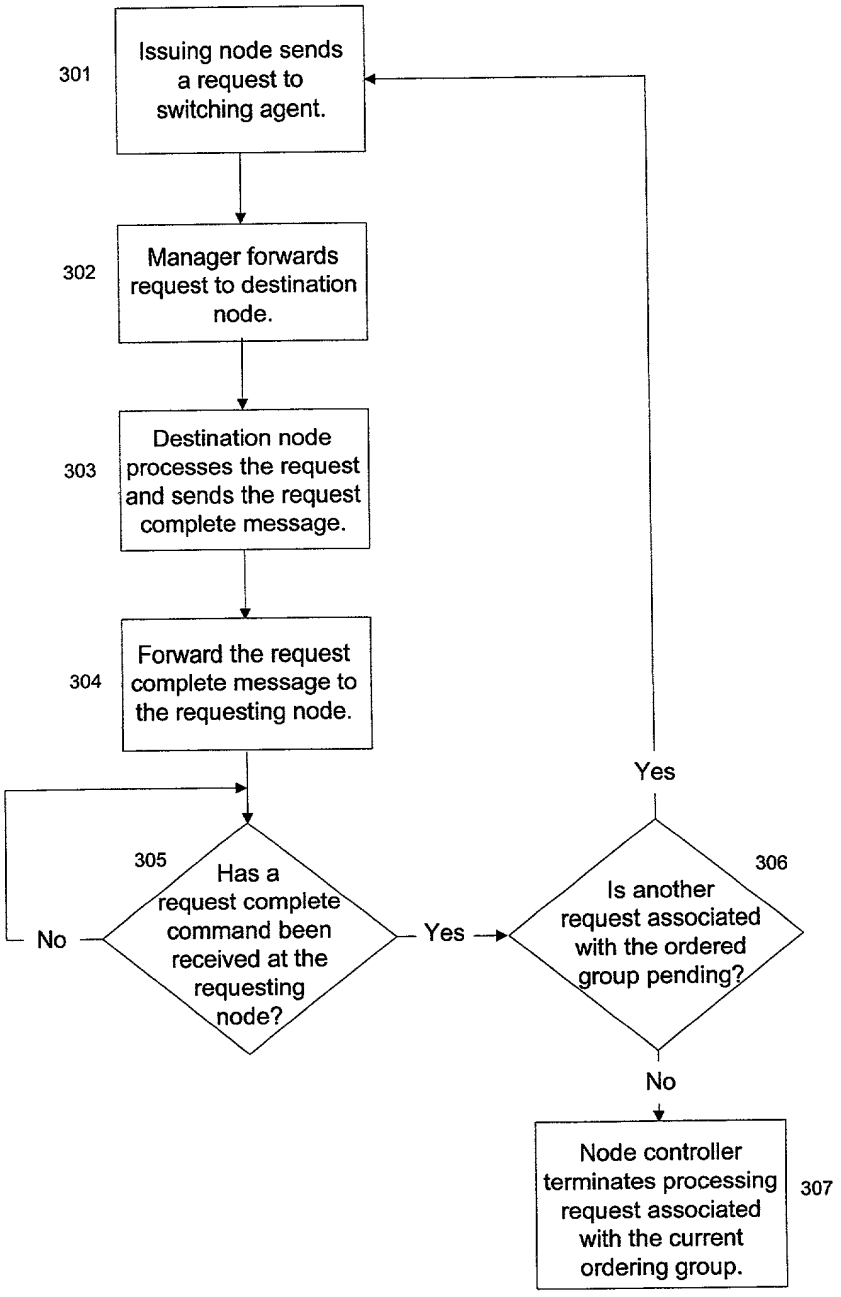

301
Issuing node sends a request to switching agent.
302
Manager forwards request to destination node.
303
Destination node processes the request and sends the request complete message.
304
Forward the request complete message to the requesting node.
305
Has a request complete command been received at the requesting node?
No
Yes
306
Is another request associated with the ordered group pending?
Yes
No
Node controller terminates processing request associated with the current ordering group.
307

FIG. 4

400

401 402 403 404

Ordering Type	Ordering Semantic	Ord[1]	Ord[0]
Un-Ordered	unorder	0	0
Forward-Ordered	fworder	0	1
Backward-Ordered	bworder	1	0
Sequentially Ordered	sorder	1	1

FIG. 5

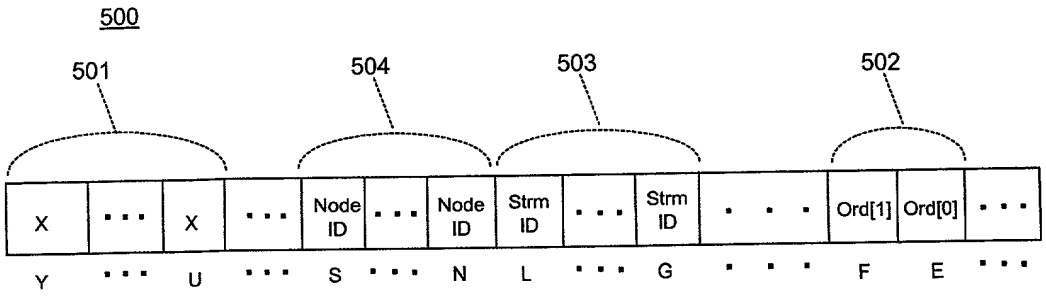


FIG. 6

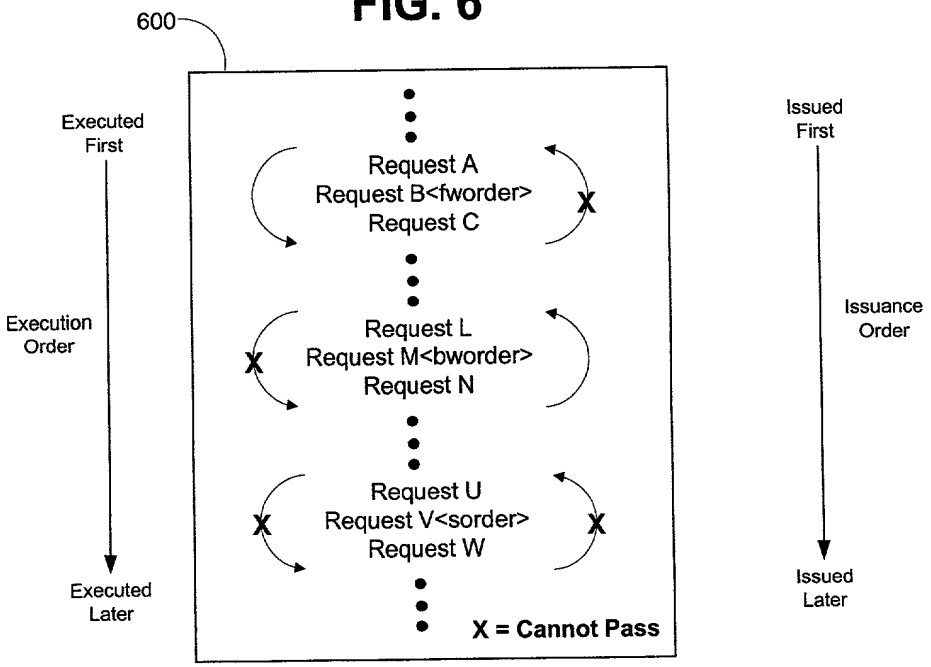


FIG. 7

700

701

703

704

Previous Request	Subsequent Request			
	Unordered	Forward Ordered	Backward Ordered	Sequentially Ordered
Unordered	--	--	O	O
Forward Ordered	O	O	O	O
Backward Ordered	--	--	O	O
Sequentially Ordered	O	O	O	O

702

FIG. 8

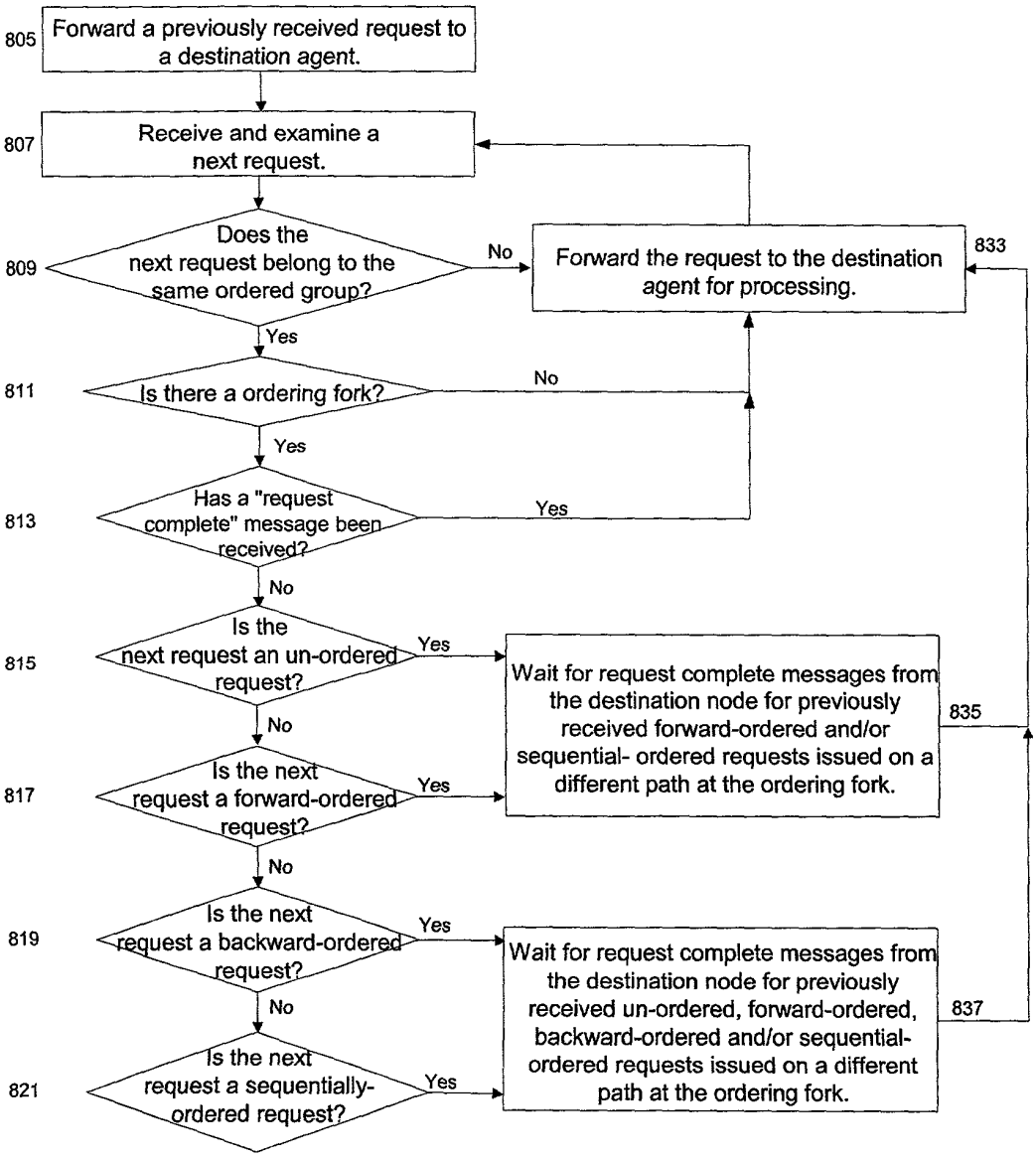
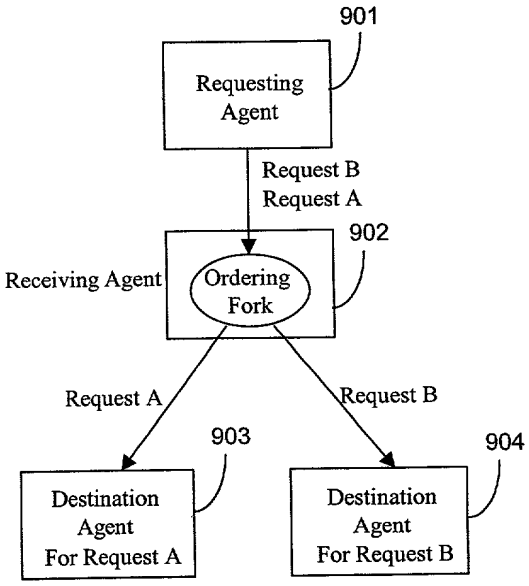

805
Forward a previously received request to a destination agent.
807
Receive and examine a next request.
809
Does the next request belong to the same ordered group?
No
Forward the request to the destination agent for processing.
833
Yes
811
Is there a ordering fork?
No
Yes
813
Has a "request complete" message been received?
Yes
No
815
Is the next request an un-ordered request?
Yes
Wait for request complete messages from the destination node for previously received forward-ordered and/or sequential- ordered requests issued on a different path at the ordering fork.
835
No
817
Is the next request a forward-ordered request?
Yes
No
819
Is the next request a backward-ordered request?
Yes
Wait for request complete messages from the destination node for previously received un-ordered, forward-ordered, backward-ordered and/or sequential-ordered requests issued on a different path at the ordering fork.
837
No
821
Is the next request a sequentially-ordered request?
Yes

FIG. 9


901
Requesting Agent
Request B
Request A
902
Receiving Agent
Ordering Fork
Request A
Request B
903
904
Destination Agent For Request A
Destination Agent For Request B